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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MACMILLAN SOBANSKI & TODD, LLC  
ONE MARITIME PLAZA FIFTH FLOOR  
720 WATER STREET  
TOLEDO, OH 43604-1619

EXAMINER
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KRAUSE, JUSTIN MITCHELL

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/669,751	<b>Applicant(s)</b> TRIPPENSEE ET AL.	
	<b>Examiner</b> Justin Krause	<b>Art Unit</b> 3682	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/20/06.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The finality of the Office Action dated July 27, 2006 is hereby withdrawn.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamada et al (US Patent 2002/0149268).

Yamada discloses an actuator comprising:

- a motor (2)
- an actuator member (4) operatively connected to the motor
- an assist mechanism comprising an assist element ( spring 11) adapted to store energy to assist in moving the actuator member, and being carried between two abutment members (8,10 (or 13)).

Regarding the limitation where the abutment members act upon the assist element to cause the assist element to store energy when the actuator member is

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moved in the extended direction and release energy when the actuator member is moved in the retracted direction, the limitation is functional, and appears to be drawn to a method of use rather than the structure of the device, and therefore is being given minimal patentable weight. MPEP 2114 states:

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

"[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

Regarding claim 2, the assist element is carried by an outer tube (10 or 13) from which the actuator member extends.

Regarding claim 3, by having an electric motor and a screw actuator, Yamada clearly is an electromechanical linear actuator and the disclosure makes repeated references throughout to the reversibility of the device and the electric motor (see for example, paragraph 0074).

Regarding claim 4, one of the abutment members is a fixed abutment member (10 or 13) and the other abutment member is a movable abutment member (8).

Regarding claim 5, the fixed abutment member is fixed relative to the outer tube and the movable abutment member is movable relative to the outer tube.

Regarding claim 7, the abutment members include a clamp fixed relative to the outer tube (10 or 13) and a collar guide (8) movable relative to the outer tube, the assist element being a helical compression spring located between the clamp and the collar guide. As it is unclear from the claim what in particular the clamp is holding, the clamp is being interpreted as clamping the spring in place, between the fixed abutment member and the movable abutment member. The broadest reasonable interpretation as defined in the 10<sup>th</sup> edition of Merriam Webster's Collegiate Dictionary facilitates this, by defining a clamp as "any of various instruments or appliances having parts brought together for holding or compressing something."

Regarding claim 8, the movable abutment member is adapted for movement by forming a connection (7) between the actuator member and the movable abutment member.

Regarding claim 9, the connection between the actuator member and the movable abutment member includes one or more connection members (disclosed as four in paragraph 0042) that extend between the actuator member and the movable abutment member.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1, 2, 4, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Washbourn et al (US Patent 4,546,296).

Washbourn discloses an actuator comprising:

- a motor (1)
- an actuator member (11 combined with 19 and 21) operatively connected to the motor
- an assist mechanism comprising an assist element (15) adapted to store energy, the assist element being carried between two abutment members (14 and 16).

Regarding the limitation where the abutment members act upon the assist element to cause the assist element to store energy when the actuator member is moved in the extended direction and release energy when the actuator member is moved in the retracted direction, the limitation is functional, and appears to be drawn to a method of use rather than the structure of the device, and therefore is being given minimal patentable weight. MPEP 2114 states:

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

"[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

The assist mechanism of Washbourn is capable of performing the claimed function, and in fact, it does operate in the claimed manner.

Regarding claim 2, Washbourn further comprises an outer tube (17) from which the actuator member extends, the assist element being carried by the outer tube.

Regarding claim 4, one of the abutment members is a fixed abutment member (16) and the other abutment member is a movable abutment member (14).

Regarding claim 5, the fixed abutment member is fixed relative to the outer tube and the movable abutment member is movable relative to the outer tube.

Regarding claim 6, the assist element is a spring.

Regarding the language that upon extending the actuator member, the movable abutment member is moved to cause the spring to be compressed to store energy and upon retracting the actuator member, the movable abutment member is free to move to permit the spring to release the energy, this language is regarded as functional, the device of Washbourn is capable of performing this function, and does perform this function. See MPEP 2114.

6. Claims 1, 2, 4, 5, 6, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Buckingham (US Patent 2,350,722).

Buckingham discloses an actuator comprising:

- a motor (26)

- an actuator member (9) operatively connected to the motor (through linkage mechanism 20, 13, and 8)

- an assist mechanism comprising an assist element (5), the assist element being carried between two abutment members (3 and 4).

Regarding the limitation where the abutment members act upon the assist element to cause the assist element to store energy when the actuator member is moved in the extended direction and release energy when the actuator member is moved in the retracted direction, the limitation is functional, and appears to be drawn to a method of use rather than the structure of the device, and therefore is being given minimal patentable weight. MPEP 2114 states:

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

“[A]pparatus claims cover what a device is, not what a device does.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

The assist mechanism of Buckingham is capable of performing the claimed function, and in fact, it does operate in the claimed manner.

Regarding claim 2, the device further includes an outer tube (the housing, illustrated in figure 1) from which the actuator member extends, the assist element being carried by the outer tube (by being supported between the actuator member and the fixed support 4, which is considered part of the outer tube by being fixed to it).



Regarding claim 4, one of the abutment members is a fixed abutment member (4) and the other abutment member is a movable abutment member (3).

Regarding claim 5, the fixed abutment member is fixed relative to the outer tube and the movable abutment member is movable relative to the outer tube.

Regarding claim 6, the assist element is a spring.

Regarding the language that upon extending the actuator member, the movable abutment member is moved to cause the spring to be compressed to store energy and upon retracting the actuator member, the movable abutment member is free to move to permit the spring to release the energy, this language is regarded as functional, the device of Buckingham is capable of performing this function, and does perform this function. See MPEP 2114.

Regarding claim 8, the movable abutment member is adapted for movement by forming a connection (11) between the actuator member and the movable abutment member.

Regarding claim 9, the connection between the actuator member and the movable abutment member includes one or more connection members (pin, 11) that extend between the actuator member and the movable abutment member.

7. Claims 1, 2, 3, 4, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Endter et al (US Patent 3,822,024).

Endter discloses an actuator comprising:

- a motor (120)

- an actuator member (134) operatively connected to the motor
- an assist mechanism comprising an assist element (150) adapted to store energy, the assist element being carried between two abutment members (142 and 108).

Regarding the limitation where the abutment members act upon the assist element to cause the assist element to store energy when the actuator member is moved in the extended direction and release energy when the actuator member is moved in the retracted direction, the limitation is functional, and appears to be drawn to a method of use rather than the structure of the device, and therefore is being given minimal patentable weight. MPEP 2114 states:

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

“[A]pparatus claims cover what a device is, not what a device does.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

The assist mechanism of Endter is capable of performing the claimed function, and does operate in the claimed manner.

Regarding claim 2, Endter further comprises an outer tube (142) from which the actuator member extends, the assist element being carried by the outer tube.

Regarding claim 3 the actuator is an electromechanical linear actuator (a motor driving a ball screw) and the motor is a reversible electric motor.

Regarding claim 4, one of the abutment members is a fixed abutment member (142) and the other abutment member is a movable abutment member (108).

Regarding claim 5, the fixed abutment member is fixed relative to the outer tube and the movable abutment member is movable relative to the outer tube.

Regarding claim 6, the assist element is a spring.

Regarding the language that upon extending the actuator member, the movable abutment member is moved to cause the spring to be compressed to store energy and upon retracting the actuator member, the movable abutment member is free to move to permit the spring to release the energy, this language is regarded as functional, the device of Washbourn is capable of performing this function, and does perform this function. See MPEP 2114.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al.

Yamada discloses all of the claimed subject matter as described above, except that it employs the use of guide rods instead of guide cables. However, in light of the fact that the device is only capable of performing true linear motion, one of ordinary skill in the art would recognize the use of a cable or a rod as interchangeable equivalents since the cable's flexibility has not been disclosed to solve any particular problem, and in true linear motion, the cable, tensioned by the spring in either direction, would function as a rod. Since applicant has not disclosed that use of a cable provides a solution to any stated problem that a rod could not also do, it appears that a rod would perform equally well as a connection member being fixed relative to the actuator member and a movable end being adapted to move and operatively engage the movable abutment member.

Regarding claim 12, each of the abutment members is provided with one or more guides (7c) through which the rods (cables) pass.

Regarding claim 13, upon retracting the actuator member beyond a certain distance, the rods (cables) extend beyond the movable abutment member (see figure 3)

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Fiege (US Patent 1,855,227).

Yamada discloses all of the claimed subject matter as described above including that the rods (cables) are fixed to the actuator member by means of an intermediate casing (13) but does not disclose a specific means of fixing the rods.

Fiege teaches the use of a clevis for attaching a cable to a support (line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a clevis to provide a means of fixing the rods (cables) to the actuator member.

11. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Tauscher (US Patent 2,424,198).

Yamada discloses all of the claimed subject matter as described above but does not specifically disclose a stop member, or the stop member being an o-ring.

Tauscher discloses an actuator with a movable abutment member (23) and a stop member (53), which is an o-ring against which the device is held by the springs when the device is not in use. (Col 3, lines 57-61)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an o-ring stop member to retain the position of the movable abutment member when the device is not in use to prevent slackening of the springs, creating excess movement of the abutment member.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Krause whose telephone number is 571-272-3012. The examiner can normally be reached on Monday - Friday, 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMK  
12/17/06



RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER